

### Witnessing the Gold Rush

### **California Education and the Environment Initiative**

Approved by the California State Board of Education, 2010

### The Education and the Environment Curriculum is a cooperative endeavor of the following entities:

California Environmental Protection Agency
California Natural Resources Agency
Office of the Secretary of Education
California State Board of Education
California Department of Education
California Integrated Waste Management Board

### **Key Leadership for the Education and Environment Initiative:**

Linda Adams, Secretary, California Environmental Protection Agency
Patty Zwarts, Deputy Secretary for Policy and Legislation, California Environmental Protection Agency
Andrea Lewis, Assistant Secretary for Education and Quality Programs, California Environmental Protection Agency
Mark Leary, Executive Director, California Integrated Waste Management Board
Mindy Fox, Director, Office of Education and the Environment, California Integrated Waste Management Board

### **Key Partners:**

Special thanks to **Heal the Bay,** sponsor of the EEI law, for their partnership and participation in reviewing portions of the EEI curriculum.

Valuable assistance with maps, photos, videos and design was provided by the **National Geographic Society** under a contract with the State of California.

Office of Education and the Environment
1001 | Street • Sacramento, California 95812 • (916) 341-6769
http://www.calepa.ca.gov/Education/EEI/

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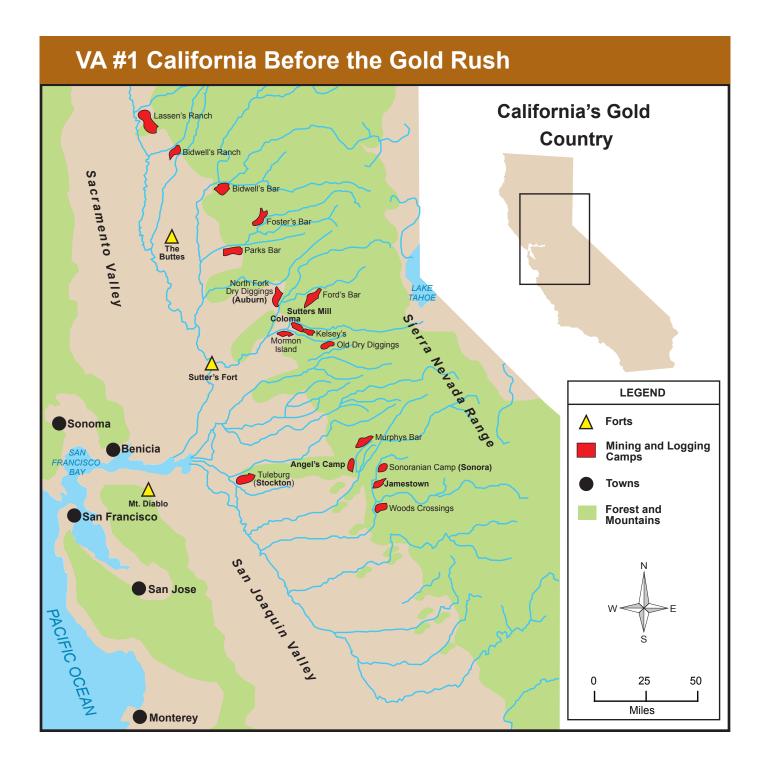
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### **Lesson 5** Flattening Mountains, Filling Valleys

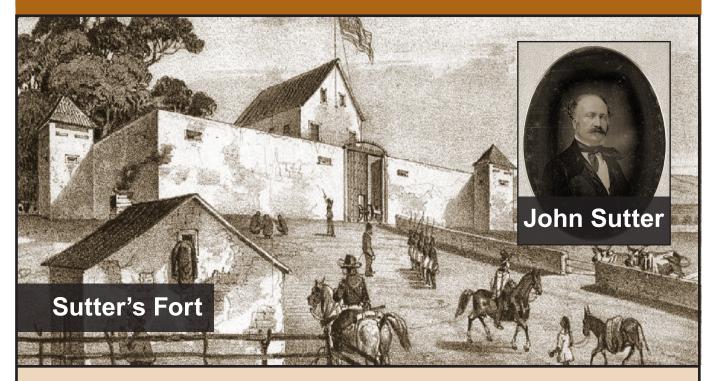
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### **Lesson 6** The Transformation Begins

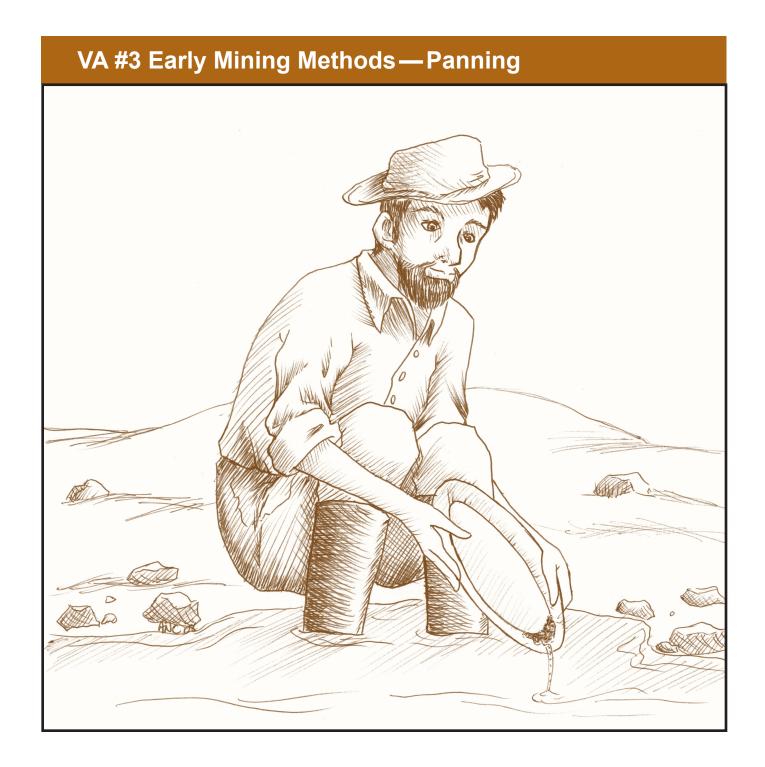
None required for this lesson.

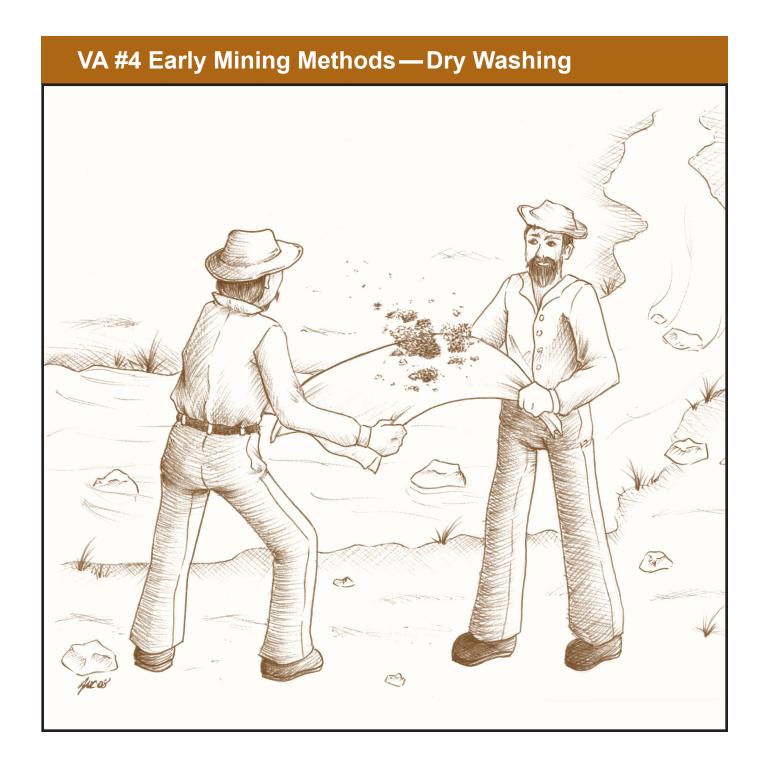


### VA #2 John Sutter and Sutter's Fort



- Sutter was born in Germany to Swiss parents and grew up in Switzerland; he came to California in 1839.
- After getting permission from the Mexican government, Sutter built a fort in what is today Sacramento.
- He grew grapes and wheat on farmland there, along with raising large herds of cattle and sheep. Sutter's Fort became a place where the goods from his farm and ranch were stored and sold to other settlers.
- Sutter and his business partner, James Marshall, decided to go into the lumber business. They wanted to build a water-powered sawmill on one of the rivers near Sacramento. At the sawmill, Marshall discovered gold in 1848.





# VA #5 Early Mining Methods—Rocker (Cradle)

### VA #6 How to Pan for Gold 1

### **Purpose:**

To collect the most gold in a given amount of time, by panning in a streambed pool.

### Your team needs:

- plastic tray
- two spoons
- cup
- streambed pool (prepared by your teacher)

### What's in your streambed pool:

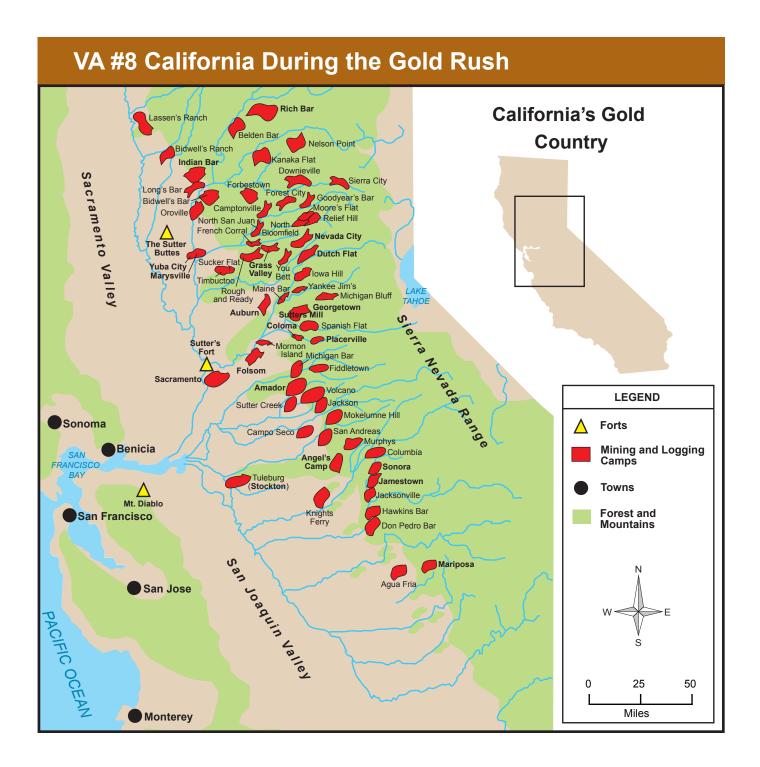
- sand—riverbed sediment
- brown beads—riverbed pebbles
- red beads—fish eggs, animal nests
- pennies or gold beads—gold nuggets
- small plastic plants—river plants



### VA #7 How to Pan for Gold 2

### Follow these steps:

- Step 1: Go to your team's assigned "streambed pool." Then take a "pan" (spoon) from the plastic tray and place the cup in a safe place.
- **Step 2:** When the teacher gives the signal to begin, your "prospector" partner and you may begin to "pan" for "gold" using ONLY the spoons—no hands. Place the "nuggets" that you find into the cup. If you remove sand or rocks (brown beads), fish eggs (red beads) or plants from the river, put them on the plastic tray.
- Step 3: After you have collected all of the gold in your pool (or time is up), walk to the "Claims Office" to record your find.
- Step 4: Once your find has been recorded at the Claims Office, return to your pool and wait for instructions.

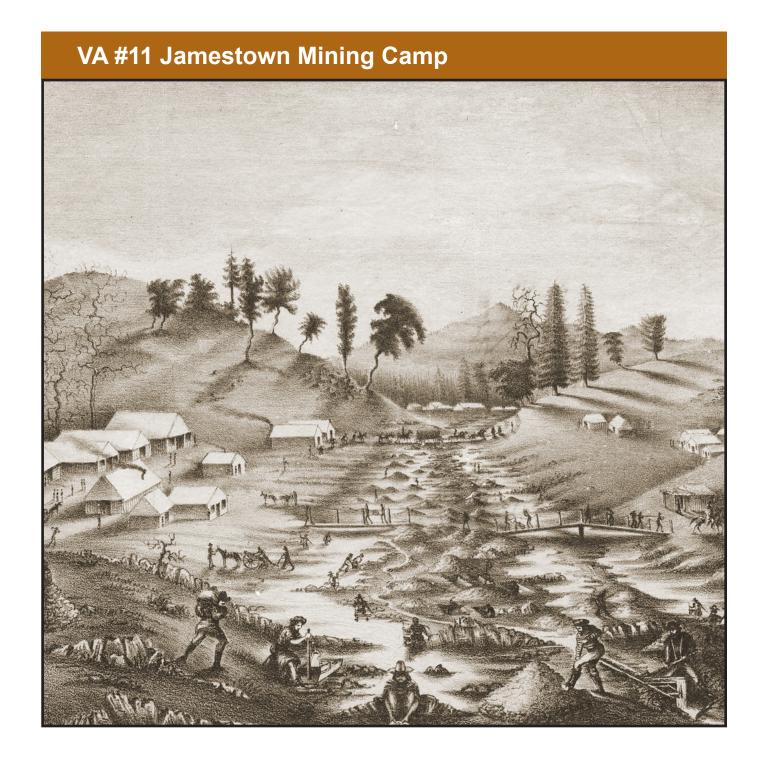


VA #9 California's Changing Population					
1848	1850				
Total Number of People:	Total Number of People :				
13,800	92,597				
■ Californios: 6,900 ■ California Indians: 6,200 ■ People from Other States (mostly): 700	■ Californios: 7,696 ■ People from Other States: 61,866 ■ People from Other Countries: 21,629				

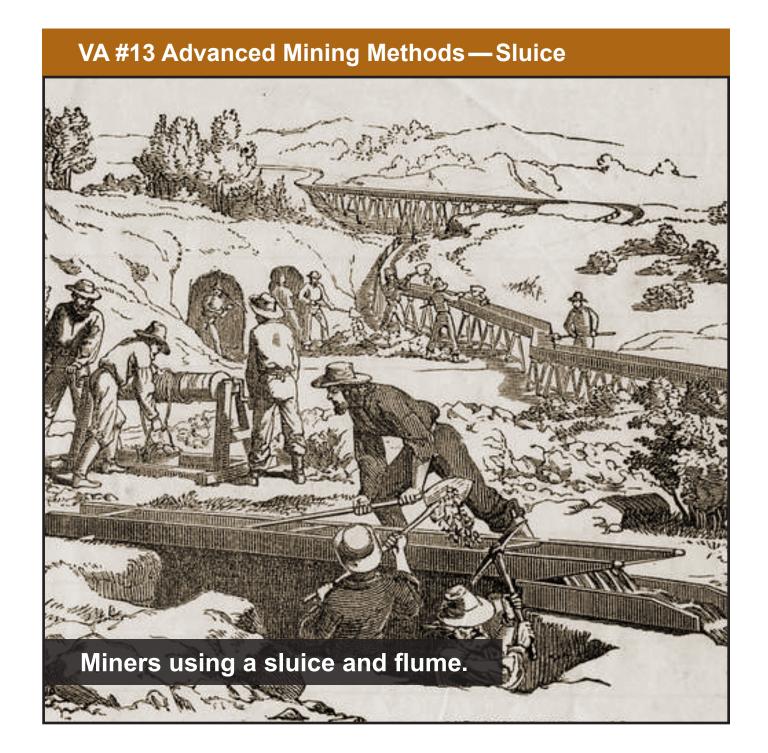
### VA #10 Louise Clapp



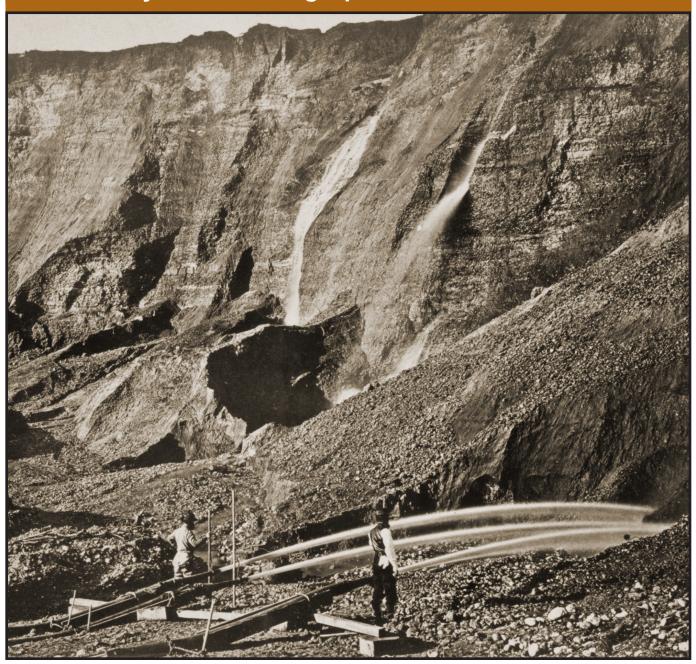
- Louise Clapp and her husband moved from New England to California in 1850.
- In 1851–1852, Louise and her husband lived in two mining camps: Rich Bar and Indian Bar.
- Under the pen name "Shirley," Louise wrote 23 letters to her sister in Massachusetts about what was happening in California.



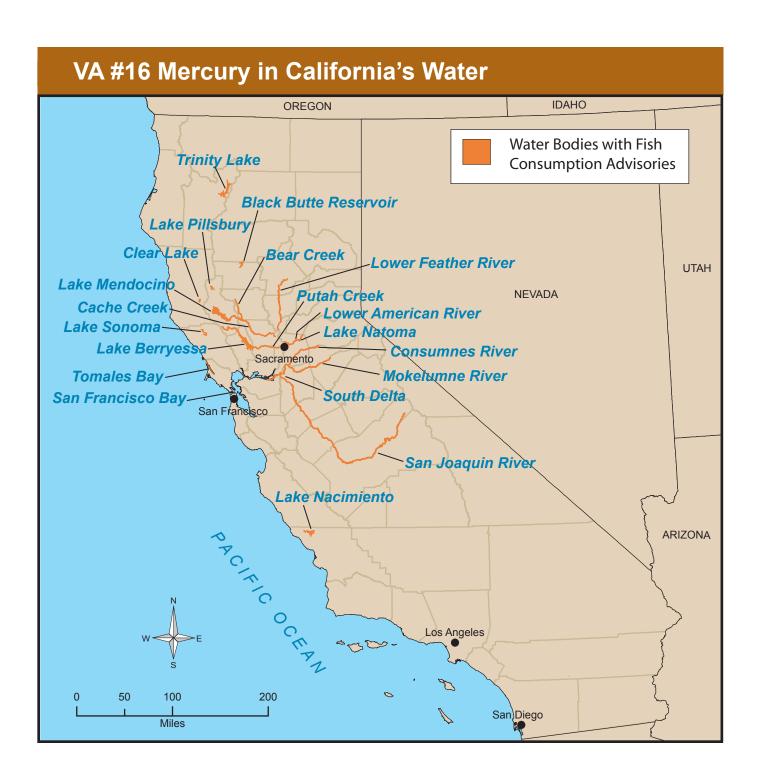
## VA #12 Advanced Mining Methods — Water Wheels Flume and water wheels providing power.



### **VA #14 Hydraulic Mining Operation**



### **VA #15 Mercury in the Food Web** 5. Humans eat fish, taking mercury into their bodies as they do so. **4.** Big fish take in the mercury as they eat smaller fish. Over time, the mercury builds up in their bodies. 3. Fish eat the small aquatic animals, and take the mercury into their bodies. 2. Small aquatic animals eat the bacteria. 1. Bacteria in the mud or sand eat the mercury that has settled to the bottom of the river or lake.



VA #17 The Debris Debate			
Farmers	Merchants		
Townspeople	Miners		





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